

Applicant : R. Scott Repp et al.
Serial No. : 08/998,124
Page : 4

an adhesive between said opaque coating and said hinge bonding area, said adhesive forming a joint bonding said hinge to said opaque coating such that there is no exposure of said hinge on said outer surface of said glass sheet whereby said hinge, when bonded to said hinge mounting area, is substantially hidden from view from said outer surface of said glass sheet by said opaque coating;

said window assembly being mounted in said generally vertical window opening of said vehicle body, said glass sheet being generally vertically mounted and at least one of a side window, rear window, and lift gate window of said vehicle; said joint supporting the weight of said glass sheet without failure in said generally vertical position when subjected to severe vibration and extreme climatic conditions when mounted and used in said generally vertical vehicle window opening.

REMARKS

Claims 2-24 remain in the application. Claims 2 and 17 have been amended herein as discussed with the Examiner during the interview conducted March 23, 1999. Claims 2-16 and 18-24 are dependent on, or ultimately dependent on, claim 2, as amended. Claim 17, as twice amended, is now in independent form. Reconsideration of the application including the claims, as amended above, as discussed with the Examiner during the interview of March 23, 1999, is respectfully requested.

Interview of March 23, 1999

As mentioned above, the undersigned counsel for Applicants conducted an interview with Examiner Redman on March 23, 1999, in which the changes to claim 2, as shown above, were proposed and discussed. In addition, claim 17, as twice amended, was proposed as an independent claim. The background and purpose of the invention was

Applicant : R. Scott Repp et al.
Serial No. : 08/998,124
Page : 5

described to the Examiner as being a vehicle window assembly intended for high load, generally vertically mounted positions on vehicles which includes bonded hinge or hinges which support the weight of the window without fasteners being drilled or extending through the glass, thereby allowing the glass to be mounted such that aerodynamic drag is reduced and exterior appearance is enhanced. In addition, it was explained that the invention was intended for large size glass panels having limited hinge size as is set forth in twice amended claim 2. A brochure of the 1996 Dodge Caravan Mini Van showing photographs of the invention mounted on that vehicle was displayed to the Examiner during the interview. It was further explained that these problems and features were not contemplated by the prior art.

In addition, during the interview, the prior art referenced in the outstanding Office Action, namely, Aldrich 4,115,955 and Kishino 4,511,129 were discussed. In addition, revisions to the language of claim 2, as twice amended, in order to clarify such language and overcome the Examiner's rejection under 35 U.S.C. § 112, second paragraph, were discussed resulting in the claim language as set forth above. In this regard, it was stated that claims 2-16 and 18-24 were intended to cover the hinged vehicle window assembly suitable for use in a vehicle but not positively claiming the vehicle itself. However, claim 17 does positively claim the vehicle in combination with the hinged vehicle window assembly and, as such, has been placed in independent form.

At the conclusion of the interview, the Examiner stated, as set forth in the interview summary, that with the above changes, claim 2, as twice amended, appeared to be allowable over the art of record. Similarly, claim 17, as proposed as an independent claim, appeared to be allowable to the Examiner over the art of record.

Applicant : R. Scott Repp et al.
Serial No. : 08/998,124
Page : 6

The courtesy, suggestions and helpfulness of the Examiner during the interview are sincerely appreciated.

Rejections Under 35 U.S.C. § 112, Second Paragraph

In the Office Action, the Examiner objected to claims 2-24 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Certain of the language in claims 2 and 17 was referenced in the Office Action, and it was not readily apparent to the Examiner if Applicants were claiming a hinged window assembly, or a hinged window assembly in combination with a vehicle.

As discussed during the interview, claim 2, as twice amended, now obviates the rejection under 35 U.S.C. § 112, second paragraph, by deleting a portion of the preamble, clarifying that the hinge bonded to the opaque coating on the hinge mounting area hingedly secures the glass sheet for movement between open and closed positions, and clarifying that the adhesive between the opaque coating and the hinged bonding area forms a joint which supports the weight of the glass sheet without failure in a generally vertical position when subjected to severe vibration and extreme climatic conditions when mounted and used in the generally vertical window opening. Hence, claims 2-16 and 18-24 clearly are directed at the hinged vehicle window assembly not in combination with a vehicle.

Further, claim 17 has been amended to be in independent form as discussed during the interview and now clearly claims a hinged vehicle window assembly in combination with a vehicle. Claim 17 now states that the vehicle is one of a van, a station wagon, a utility vehicle and a truck and has a vehicle body having a generally vertical window opening. The hinged vehicle window is also defined in substantially the same

Applicant : R. Scott Repp et al.
Serial No. : 08/998,124
Page : 7

manner as set forth in claim 2, as twice amended, but indicates the window assembly is mounted in the generally vertical window opening of the vehicle body with the glass sheet being generally vertically mounted and being at least one of a side window, rear window, and lift gate window of the vehicle.

Based on these changes, it is respectfully submitted that claims 2-24, as twice amended, now clarify the hinged vehicle window assembly or the hinged vehicle window assembly in combination with a vehicle, and that the rejection under 35 U.S.C. § 112, second paragraph, should be withdrawn.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 2-24 were further rejected under 35 U.S.C. § 103(a) as being unpatentable over Aldrich '955 in view of Kishino '129. As explained during the interview, claim 2, as twice amended, now defines a hinged vehicle window assembly suitable for use in a vehicle including a glass sheet, a substantially opaque coating on a predetermined portion of the inner sheet surface and adjacent to the peripheral edge along portions of the glass sheet, the hinge mounting area being adjacent to one edge portion of the peripheral edge, and the opaque coating being included on the hinge mounting area. Further, a hinge is bonded to the opaque coating on the hinge mounting area to hingedly secure the glass sheet for movement between open and closed positions. The hinge has a bonding area of at least two square inches and an aspect ratio of at least one. The glass sheet has a surface area of at least 250 square inches. The bonding of the hinge to the opaque coating on the mounting area is sufficiently strong to withstand a straight pull test of about 150 pounds at a rate of about 25 millimeters per minute, the straight pull test being performed after soaking the window assembly in water for at least 100 hours, the water being at a temperature of about 80°C. An

Applicant : R. Scott Repp et al.
Serial No. : 08/998,124
Page : 8

adhesive is provided between the opaque coating and the hinge bonding area. The adhesive forms a joint bonding the hinge to the opaque coating such that there is no exposure of the hinge on the outer surface of the glass sheet whereby the hinge, when bonded to the hinge mounting area, is substantially hidden from view from the outer surface of the glass sheet by the opaque coating. Further, the window assembly is adapted for mounting such that when fitted within a generally vertical window opening of the vehicle body, the glass sheet will be generally vertically mounted and will be at least one of a side window, rear window, and lift gate window of the vehicle. The joint supports the weight of the glass sheet without failure in a generally vertical position when subjected to severe vibration and extreme climatic conditions when mounted and used in the generally vertical vehicle window opening.

Claim 17, as twice amended, is similar to claim 2, as twice amended, but recites a vehicle in combination with the hinged vehicle window assembly wherein the vehicle is one of a van, station wagon, utility vehicle, and truck.

As discussed in the interview, neither Aldrich '955 nor Kishino '129 disclose or suggest claims 2 or 17, as amended, nor is there any basis to combine the two references, and even if combined, they do not result in Applicants' invention.

As previously discussed of record in this application, Aldrich is directed to a panel and hinge assembly intended for use as a vehicle sun roof to be installed in the rigid roof of a vehicle such as an automobile to permit entry of light and air from the top of the vehicle. The sun roof assembly of Aldrich is generally horizontal, with a substantial portion of the weight thereof supported by generally horizontally extending hinges together with panel jamb 26 and window seal 35 on the vehicle. Its hinges are attached via mounting plates secured to blocks which, in turn, are secured to the inside of the sun roof assembly with a

Applicant : R. Scott Repp et al.
Serial No. : 08/998,124
Page : 9

bonding material or adhesive. However, Aldrich '955 fails to recite the aspects of Applicants' invention which are set forth in twice amended claim 2 including the bonding area being at least two square inches and an aspect ratio of at least one, the glass sheet having a surface area of at 250 square inches, and the bond strength of the hinge to the opaque coating being sufficiently strong to withstand a straight pull test of about 150 pounds at a rate of about 25 millimeters per minute, the straight pull test being performed after soaking the window assembly in water of about 80°C for at least 100 hours. As such, Aldrich is not concerned with generally vertically mounted window situations in vehicles. If the hinge structure of the Aldrich assembly fails, its sun roof assembly would stay in place supported by the roof therearound. This is not the case, however, with Applicants' invention where the hinge supports the weight of the glass sheet without failure in a generally vertical position, even when subjected to severe vibration and extreme climatic conditions when generally vertically mounted in a vehicle window opening, all with the hinge being substantially hidden from view from the outer surface of the glass sheet by the opaque coating and without the hinge being exposed on the outer surface of the window. Therefore, Aldrich '955 alone does not disclose or suggest Applicants' invention.

The lack of disclosure in Aldrich for the various features of Applicants' invention was clearly recognized by the Examiner in the Office Action and is not supplied or provided by Kishino as an additional reference. Indeed, Kishino '129 is an example of a typical prior known window assembly over which the present invention is an improvement. In the background of the invention on page 2 of Applicants' specification, lines 5-10, Applicants clearly describe a prior known window assembly using a channel which extends around the edge of the window pane to allow pivotal movement of the pane but is clearly

Applicant : R. Scott Repp et al.
Serial No. : 08/998,124
Page : 10

visible on the exterior of the window pane. This is exactly the case with Kishino '129 where, as shown in Figs. 2 and 3, hinge 10 including channel 11 receives the front edge of window pane 2 and, therefore, provides a structure which is exposed on the outer surface of the window pane, unlike Applicants' present invention. Such structure, therefore, causes drag, turbulence and a distinctly different appearance from Applicants' invention. In addition, there is no suggestion in Kishino '129 for the size of the glass sheet, joint strength or hinge size as set forth in twice amended claims 2 or 17. Therefore, taken alone, Kishino does not disclose or suggest Applicants' invention.

In addition, there is no teaching or suggestion in either Kishino or Aldrich for their combination, since one is directed to a distinctly different sun roof assembly for horizontal mounting in a rigid roof structure using an entirely different mounting assembly, and the other is directed to a rear quarter window having a hinge and channel structure which extends around the front edge of the window panel and is exposed on the outer surface of the window. Moreover, even if combined, Aldrich '955 and Kishino '129 would fail to disclose or suggest the structure of Applicants' invention as set forth in twice amended claims 2, 17, and all of claims 3-16 and 18-24 which depend from claim 2.

Accordingly, similar reasons, dependent claims 3-16 and 18-24 are likewise not shown, disclosed or suggested and are not made obvious by Aldrich '955 or Kishino '129, taken alone or in any combination.

Accordingly, in view of the above amendments and the interview with Examiner Redman conducted March 23, 1999, as well as the above comments, it is respectfully submitted that claims 2-24, as twice amended, are now in condition for allowance. It is respectfully submitted that these amendments are proper for entry under 37

Applicant : R. Scott Repp et al.
Serial No. : 08/998,124
Page : 11

C.F.R. 1.116 and could have not been presented earlier until the position of the Examiner was made fully known through discussion in the interview. Since these amendments place this case in condition for allowance as agreed to by the Examiner during the interview, entry thereof is respectfully requested along with a Notice of Allowance for claims 2-24, as twice amended.

Respectfully submitted,

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